

### **REMARKS**

Claims 1-27 29-31, 33-42 and 48-52 are pending in the application. Of these pending claims, Claims 19-22 and 48-52 are withdrawn from consideration, Claims 1-12, 14-17, 23-27, 29-31 and 33-42 are rejected, and Claims 13 and 18 are objected to. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **CLAIM OBJECTIONS**

The Examiner's attention is directed to Claims 2, 13, 18, 31, 35 and 42 which have been amended to overcome the claim objections.

### **REJECTION UNDER 35 U.S.C. § 102**

Claim 42 stands rejected under 35 U.S.C. 102(b) as being anticipated by Bregenzer et al. (GB Application 2,065,011). The Examiner's attention is directed to Claim 42 which has been amended to include the limitation that the first and second metallic layers are welded together. Applicants note that the '011 reference is silent to the coupling of the metallic layers.

### **REJECTION UNDER 35 U.S.C. § 103**

Claims 1-12, 14-17, 23-27, 29-31, and 33-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bregenzer et al. (GB Application 2,065,011) in view of Soyer (DE-4,222,664) and Applicants' disclosure.

The Examiner's attention is respectfully directed to the Declaration of Cary Meloche. The declaration of Mr. Meloche is being submitted as evidence of secondary considerations that establish that the claimed invention is not obvious in light of the prior art. "when differences that may appear technologically minor nonetheless have a practical impact, particularly in a credit field, the decision-maker must consider the obviousness of the new structure in this light. Such objective indicia as commercial success or filling in existing need, eliminate the technological and commercial environment of the inventor, and aid in understanding the state of the art at the time the invention was made." *Continental Can Co. USA v. Monsanto Co.*, 20 USPQ2d 1736, 1752 (Fed. Cir. 1991).

In his declaration, Mr. Meloche states that the ring stud has been a great commercial success, and that the great commercial success of the ring stud is primarily based on technical features thereof and not significantly based on marketing, advertising or pricing. In this regard, Emhart Teknologies has sold approximately 12.5 million ring studs to-date to the North American auto industry. Further, as stated in item element No. 4, the pricing to the customers of this particular ring stud is increased as compared to the product it has replaced. The undersigned respectfully submits that any increases to the price of components sold to the North American automotive industry are quite rare during these times.

As stated in the declaration of Mr. Meloche, the ring stud can be welded to thin gauged metals and sheet metal without having a head portion that stands too proud from the weld surface. Further, the weld stud, as claimed, provides greatly increased welding machine tolerances without an increase in the occurrence of burn through

failures. As stated in item No. 6 of the declaration, the great commercial success of the Emhart Technologies ring stud is primarily based on the technical featured thereof and not significantly based on marketing, advertising or pricing. This is particularly evidenced by the increase the sales price of the ring stud.

As states in item No. 7 of the declaration, each of the ring studs referenced employs at least the items listed in the attached claims, herein pending before the U.S. Patent and Trademark Office. As such, the prima facie case of the required nexus is made by showing both that there is a commercial success and that the product that is commercial successful is the invention disclosed in the claimed patent has been made. See *Demaco Corp. v. F. VonLangsdorff Licensing Ltd.*, 7, USPQ2d 1222, 1226-7 (Fed. Cir. 1988).

Claims 1-12, 14-17, 23, 27, 29-31 and 33-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bregenzer et al in view of Soyer. The Office Action states that Soyer suggests in Figures 1A and page 2, last paragraph, that the "height h...amounts preferably to 1mm". The Office Action states that Soyer shows both weld stud and weld nuts could advantageously make use of the disclosed weld interface. Applicants respectfully traverse this characterization. Applicants note that the table cited by the Office Action only discloses the dimension of the weld nut and is completely silent as to the dimensions of a weld stud. Further, Applicants note that the stresses a weld nut are subjected to are completely different that the stresses seen by the externally threaded weld stud. As the dimension H relates to a portion of the weld nut body which is internally threaded, its analog with a weld stud would be the length of the threaded shaft on a stud shank. The dimension, therefore, is not analogous to a

dimension of the head portion. The dimensions claimed are important to meet the failure strength requirements of many of the claims.

Applicants note that the Examiner has not cited anything within the references to provide the necessary motivation to combine the references. While Applicants acknowledge that the motivation to combine can be found implicit to the knowledge of one skilled in the art, Applicants respectfully assert that the Office Actions do not explain what specific understanding or technology principle within the knowledge of one of ordinary skill in the art would have suggested the combination. “The Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention would select the elements from the cited prior art references for combination in the manner claimed.” *In re Rouffett*, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998). Failure to show the specific understanding or principle within the knowledge of a skilled artisan leads to an inference that the Examiner’s utilizing hindsight construction. See *Id* at 1458.

With respect to the rejection of Claims 4 and 27, the Office Action states that the Soyer reference suggests providing a weakened section (5, Figure 1b) adjacent to the head, in order to “prevent settling of weld splashes” (last paragraph of Soyer’s disclosure). Applicants note that the cited groove is on an interior radius of the weld nut and is not disclosed on the threaded shank as is claimed. This groove would not necessarily provide a torsional tensile failure point.

With respect to the rejections of Claims 5 and 24, the Office Action states that it would have been within an obvious scope to one having ordinary skill in the art at the time the invention was made, to contrive a range of 20-35% for the relative thickness

ration. Applicants respectfully reject the analysis using the Soyer nut reference for the teaching of the weld stud having 9-16% weldment to thickness ratio. Further, the Applicants respectfully direct the Examiner's attention to the attached Declaration of Cary Meloche that shows that there has been great commercial success with respect to product utilizing these limitations.

The Office Action states that the Soyer reference is not completely silent on the issue of head dimensions, and suggests to at least within an obvious scope, an annular weldment thickness of less than 50% of the head thickness, and preferably about 9-16%. The Office Action states that Soyer's teaching broadly suggests the desirability to have a thinner annular weldment area than the fastening head. Applicants respectfully traverse this characterization inasmuch as the Soyer reference is completely silent as to the dimensions of the head of a weld stud. Applicants note, particularly in the automotive industry, that the gauge of sheet metal is continually decreasing to improve fuel economy. While this is happening, the requirements by the auto industry for pull-out and torque failures of the sheet metal structures have not changed. As discussed in the specification of the instant application, one common failure is a torsional failure of the stud to sheet metal upper face which leaves a hole through the sheet metal. This hole becomes a transport mechanism for corrosive liquids within the vehicle. As such, this type of failure unacceptable to the automotive manufacturers. Applicants' invention overcomes this critical problem by having varying failure loads for different portions of the stud which are less than the failure load of the weldment itself or sheet metal. Applicants note that none of the references cited teach the varying failure load as claimed in the instant application. The dimensional limitations in some of the claims

allow for the failing of the web prior to the failing of the sheet metal. This combined with the Declaration of Cary Meloche shows that Applicants' invention is not obvious in view of the prior art known to those at the time the invention was made.

#### **ALLOWABLE SUBJECT MATTER**

The Examiner states that Claims 13 and 18 would be allowable if certain informalities are attended to. Accordingly, Applicants have amended Claims 13 and 18. Therefore, Claims 13 and 18 should now be in condition for allowance.

#### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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